In the Claims:

Claims 1-13 (Cancelled)

14. (Currently amended) A pharmaceutical parathyroid hormone (PTH) antagonist composition, wherein the PTH antagonist composition comprises a peptide ~~having a contiguous portion of human PTH having an amino acid sequence set forth in SEQ ID NO:1 (PTH_{1-84}), or a conservatively substituted variant thereof,~~ exhibiting PTH antagonist activity ~~in a therapeutically effective, but non-toxic amount~~, together with a pharmaceutical carrier or excipient, wherein the PTH antagonist comprises a contiguous portion of human PTH having an amino acid sequence set forth in SEQ ID NO:1 (PTH_{1-84}) that has the following characteristics:

a) the N-terminal amino acid residue of the PTH antagonist starts at any position spanning from position **[[2]]** 8 through position 34 of SEQ ID NO:1 (PTH_{1-84}); and

b) the C-terminal amino acid residue of the PTH antagonist ends at position 84 of SEQ ID NO:1 (PTH_{1-84}).

Claim 15 (Cancelled)

16. (Currently amended) The antagonist of claim 14, wherein the PTH antagonist is selected from the group consisting of ~~SEQ ID NO:2 (PTH_{2-84}), SEQ ID NO:4 (PTH_{3-84}),~~ SEQ ID NO:5 (PTH_{28-84})**[[,]]** and SEQ ID NO:3 (PTH_{34-84}).

Claims 17-21 (Cancelled)

22. (Currently amended) A method for treating a patient having hyperparathyroidism comprising administering to a patient having hyperparathyroidism a PTH antagonist peptide ~~having a contiguous portion of human PTH having an amino acid sequence set forth in SEQ ID NO:1 (PTH_{1-84}), or a conservatively substituted variant thereof,~~ exhibiting PTH antagonist activity, which antagonist activity comprises decreasing the *in vivo* calcium ion concentration in the blood of the patient or countering hypercalcemia, in a therapeutically effective, but non-toxic amount, wherein the PTH antagonist comprises a contiguous portion of human PTH having an amino acid sequence set forth in SEQ ID NO:1 (PTH_{1-84}) that has the following characteristics:

a) the N-terminal amino acid residue of the PTH antagonist starts at any position spanning from position 2 through position 34 of SEQ ID NO:1 (PTH_{1-84}); and

b) the C-terminal amino acid residue of the PTH antagonist ends at position 84 of SEQ ID NO:1 (PTH_{1-84}).

23. (Previously added) The method of claim 22, wherein the N-terminal amino acid residue of the PTH antagonist starts at any position spanning from position 3 through position 28 of SEQ ID NO:1 (PTH_{1-84}), and the C-terminal amino acid residue of the PTH antagonist ends at position 84 of SEQ ID NO:1 (PTH_{1-84}).

24. (Previously added) The method of claim 22, wherein the PTH antagonist is selected from the group consisting of SEQ ID NO:2 (PTH_{2-84}), SEQ ID NO:4 (PTH_{3-84}), SEQ ID NO:5 (PTH_{28-84}), and SEQ ID NO:3 (PTH_{34-84}).

25. (Previously added) The method of claim 22, wherein the PTH antagonist is administered together with a pharmaceutical carrier or excipient.

26. (Currently amended) A method for treating a patient having renal osteodystrophy comprising administering to a patient having renal osteodystrophy a PTH antagonist peptide ~~having a contiguous portion of human PTH having an amino acid sequence set forth in SEQ ID NO:1 (PTH_{1-84}), or a conservatively substituted variant thereof,~~ exhibiting PTH antagonist activity, which antagonist activity comprises decreasing the *in vivo* calcium ion concentration in the blood of the patient or countering hypercalcemia, in a therapeutically effective, but non-toxic amount, wherein the PTH antagonist comprises a contiguous portion of human PTH having an amino acid sequence set forth in SEQ ID NO:1 (PTH_{1-84}) that has the following characteristics:

a) the N-terminal amino acid residue of the PTH antagonist starts at any position spanning from position 2 through position 34 of SEQ ID NO:1 (PTH_{1-84}); and

b) the C-terminal amino acid residue of the PTH antagonist ends at position 84 of SEQ ID NO:1 (PTH_{1-84}).

27. (Previously added) The method of claim 26, wherein the N-terminal amino acid residue of the PTH antagonist starts at any position spanning from position 3 through position 28 of

SEQ ID NO:1 (PTH_{1-84}), and the C-terminal amino acid residue of the PTH antagonist ends at position 84 of SEQ ID NO:1 (PTH_{1-84}).

28. (Previously added) The method of claim 26, wherein the PTH antagonist is selected from the group consisting of SEQ ID NO:2 (PTH_{2-84}), SEQ ID NO:4 (PTH_{3-84}), SEQ ID NO:5 (PTH_{28-84}), and SEQ ID NO:3 (PTH_{34-84}).

29. (Previously added) The method of claim 26, wherein the PTH antagonist is administered together with a pharmaceutical carrier or excipient.

30. (Currently amended) A method for *in vivo* ~~modulation of~~ decreasing calcium ion concentration in blood of a subject comprising administering to a subject a PTH antagonist peptide ~~having a contiguous portion of human PTH having an amino acid sequence set forth in SEQ ID NO:1 (PTH_{1-84}), or a conservatively substituted variant thereof,~~ exhibiting PTH antagonist activity, which antagonist activity comprises decreasing the *in vivo* calcium ion concentration in the blood of the subject or countering hypercalcemia, in a ~~therapeutically effective, but~~ non-toxic amount, wherein the PTH antagonist comprises a contiguous portion of human PTH having an amino acid sequence set forth in SEQ ID NO:1 (PTH_{1-84}) that has the following characteristics:

a) the N-terminal amino acid residue of the PTH antagonist starts at any position spanning from position 2 through position 34 of SEQ ID NO:1 (PTH_{1-84}); and

b) the C-terminal amino acid residue of the PTH antagonist ends at position 84 of SEQ ID NO:1 (PTH_{1-84}).

31. (Previously added) The method of claim 30, wherein the N-terminal amino acid residue of the PTH antagonist starts at any position spanning from position 3 through position 28 of SEQ ID NO:1 (PTH_{1-84}), and the C-terminal amino acid residue of the PTH antagonist ends at position 84 of SEQ ID NO:1 (PTH_{1-84}).

32. (Previously added) The method of claim 30, wherein the PTH antagonist is selected from the group consisting of SEQ ID NO:2 (PTH_{2-84}), SEQ ID NO:4 (PTH_{3-84}), SEQ ID NO:5 (PTH_{28-84}), and SEQ ID NO:3 (PTH_{34-84}).

33. (Previously added) The method of claim 30, wherein the PTH antagonist is administered together with a pharmaceutical carrier or excipient.

34. (Currently amended) A method for treating a patient having osteoporosis comprising administering to a patient having osteoporosis a PTH antagonist peptide ~~having a peptide having a contiguous portion of human PTH having an amino acid sequence set forth in SEQ ID NO:1 (PTH_{1-84}), or a conservatively substituted variant thereof,~~ exhibiting PTH antagonist activity, which antagonist activity comprises decreasing the *in vivo* calcium ion concentration in the blood of the patient or countering hypercalcemia, in a therapeutically effective, but non-toxic amount, wherein the PTH antagonist comprises a contiguous portion of human PTH having an amino acid sequence set forth in SEQ ID NO:1 (PTH_{1-84}) that has the following characteristics:

a) the N-terminal amino acid residue of the PTH antagonist starts at any position spanning from position 2 through position 34 of SEQ ID NO:1 (PTH_{1-84}); and

b) the C-terminal amino acid residue of the PTH antagonist ends at position 84 of SEQ ID NO:1 (PTH_{1-84}).

35. (Previously added) The method of claim 34, wherein the N-terminal amino acid residue of the PTH antagonist starts at any position spanning from position 3 through position 28 of SEQ ID NO:1 (PTH_{1-84}), and the C-terminal amino acid residue of the PTH antagonist ends at position 84 of SEQ ID NO:1 (PTH_{1-84}).

36. (Previously added) The method of claim 34, wherein the PTH antagonist is selected from the group consisting of SEQ ID NO:2 (PTH_{2-84}), SEQ ID NO:4 (PTH_{3-84}), SEQ ID NO:5 (PTH_{28-84}), and SEQ ID NO:3 (PTH_{34-84}).

37. (Previously added) The method of claim 34, wherein the PTH antagonist is administered together with a pharmaceutical carrier or excipient.

38. (Previously added) The method of claim 34, wherein the PTH antagonist administration is either in a continuous or in a pulsatile manner.